

AIRBUS

SHIP JAN 4, 2017

Work Order ID 153363

153363

Page 1

Friday, November 18, 2016 11:41:17 AM

Item ID: D350-591-312

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Heli-Access-Step™ RH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 12/12/2016 Start Qty: 10.00

10

Cust Item ID:

Required Date: 12/22/2016 Req'd Qty: 10.00

10

Customer:

Reference:

Approvals: Process Plan: VS

Date: 16/11/18

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D3272

Rev B

DEC 19 2016

DAS
6
9-89DAS
21
9-891612-19
13

100

Document Control

0.00

100

DOCUMENT CONTROL

DC

Memo

0.00

Doc.Control -USB or Paperwork

Photocopy bluefile and type labels as per PPP D350-591-312 CHG001

DAS
27
9-89

JAN 03 2017

110

Large Fab

0.00

110

Large Fab

Memo

0.67

Large Fab

1-Bevel end for welding FWD ONLY

2-Weld Support using Jig DT10115, weld Fwd End Plate as per QSI 004 & Dwg D3272

A/R Aluminum Rod M130855

3-Grind End Plate flush

16/11/30

DEC 02 2016
DAS
24
9-89

10x B#153363 x

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
340 2010		340 2010		Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

Friday, November 18, 2016 11:41:17 AM

153363

Page 2

N900040100

Setup Start *NS1*

Stop *NS2*

Stop *NS2*

Start Date: 12/12/2016 **Start Qty:** 10.00 ***10***

Cust Item ID:

Required Date: 12/22/2016 **Req'd Qty:** 10.00 ***10***

Customer:

Reference:

Approvals: **Process Plan:** **Date:** **Tooling:** **Date:**

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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120	QC9- Inspect visual per OSI004- Fusion Welds	0.00
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120

OC

Memo

0.00

Quality Control

⑤

16-12-06

DAS
9
9-89

130	QC5- Inspect part completeness to step on W/O	0.00
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130

QC

Memo

0.03

Quality Control

(v)

16-12-26

DAS
9
9-89

140	Chemical Conversion Coat per QSI005 4.1	0.00
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140

HandFinish

Memo

0.68

Hand Finishing

x/10

[Signature]

2016/12/06

3E5

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	

Root Cause				FAULT CATEGORY			
Environment ☐	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐
Design ☐	☐	Operator	☐	Bending	☐	Set-up	☐
Doc/Data ☐	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐
Equip/Tooling ☐	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐
Handling/Pre ☐	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐
Material ☐	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐
Internal Transport ☐	☐	Poor Information	☐	Crushing	☐	Countersink	☐
Tribal Knowledge ☐	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐
LOA ☐	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐
Substation ☐	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐
Past Expiry Date ☐	☐	Manufacturing Process	☐	OTHER : _____			
Misidentified ☐	☐	Past Due	☐				

Work Order ID 153363

Friday, November 18, 2016 11:41:17 AM

153363

Page 3

Item ID: D350-591-312

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Heli-Access-Step™ RH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 12/12/2016 Start Qty: 10.00

10

Cust Item ID:

Required Date: 12/22/2016 Req'd Qty: 10.00

10

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

NR1

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	QC7-Inspect Chemical Conversion Coat	0.00							
150									
QC	Memo	0.02							
Quality Control									
180		0.00							
180	Large Fab								
Large Fab	Memo	0.67							
Large Fab	1-Assemble Leg Assembly as per Dwg D3272.								
	2-Leave one rivet out until welding is complete.								
	3-Bevel Aft end for welding								
	4-Inspect for foreign object as per QSI 024								
	5-Weld Aft End Plate as per QSI 004 & Dwg D3272								
	A/RAluminum Rod <u>134826</u>								
	6-Grind End Plate flush								
	7-Install last rivet as per Dwg.								

DAS
9
9-89

C/DG 10 16-12-07

DEC 08 2016

DAS
24
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																																																									
Description Work Order Deviation				Disposition																																																													
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER :			
Misidentified ☐	Past Due ☐																																																																

Work Order ID 153363

Friday, November 18, 2016 11:41:17 AM

153363

Page 4

Item ID: D350-591-312**Accept*****N900040100*****Setup Start*****NS1*****Revision ID:****Stop*****NS2*****Item Name:** Heli-Access-Step™ RH - High Gear, Long Step, Aerazur Float Compatible**Start Date:** 12/12/2016 **Start Qty:** 10.00***10*****Cust Item ID:****Required Date:** 12/22/2016 **Req'd Qty:** 10.00***10*****Customer:****Reference:****Approvals:** **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____**Run Start*****NR1*****QC:** _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____**Stop*****NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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190	QC10- Inspect visual per QSI004- ground welds	0.00							
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190

QC

Memo

0.00

Quality Control

(10) 16-12-08

DAS
9
9-89

200	QC5- Inspect part completeness to step on W/O	0.00							
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200

QC

Memo

0.03

Quality Control

(10) 16-12-08

DAS
9
9-89

210	Chemical Conversion Coat per QSI005 4.1	0.00							
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210

HandFinish

Memo

0.17

Hand Finishing

(X10) X

2016/12/08

BEB

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
100 e PB-0								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : _____			

Work Order ID 153363***153363***

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Friday, November 18, 2016 11:41:17 AM

Item ID: D350-591-312

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Heli-Access-Step™ RH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 12/12/2016 Start Qty: 10.00

10

Cust Item ID:

Required Date: 12/22/2016 Req'd Qty: 10.00

10

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
220	White Gloss(Ref 4.3.5.1) per QSI005 4.3-Alum	0.00							
220 Powdercoat Powder Coating	<i>M136113</i> Memo START TIME: <i>1:30</i> OVEN TEMPERATURE: <i>320°</i> FINISH TIME: <i>2:00</i>	0.35				<i>10</i>	<i>0</i>	<i>10-12-12</i>	<i>333</i>
230	Wing Walk as per dwg QSI005 4.4 Batch <i>M136206</i>	0.00							
230 HandFinish Hand Finishing	Memo	0.37				<i>(X10)</i>	<i>0</i>	<i>2016/12/14</i> <i>BEB</i>	P.T.O.
240	QC3- Inspect Part Finish	0.00							
240 QC Quality Control	Memo	0.02				<i>10</i>		<i>DAS</i> <i>38</i> <i>0-89</i>	DEC 16 2016

DQA:

Date:

2017-02-16



QA Closed:

Date:

JAN 30 2017

WORK ORDER NON-CONFORMANCE / UPDATE

Work Order update only ☐

Work Order: <u>153363</u>		DISPOSITION		AGAINST DEPARTMENT/PROCESS					
Part No. <u>D350-591-312</u>		Rework ☒		Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐		
NCR No. <u>17-6244</u>		Scrap ☐		Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐		
		Use-as-is ☐		Thermoforming ☐	Finishing ☒	Rec/Store/Packaging ☐	Other ☐		
		Suspected Unapproved ☐		Large Fab ☐	Composite ☐	Supplier ☐			
Date: <u>16-12-13</u>		Step #: <u>220</u>		QTY Effective: <u>1</u>			MRB (QSI042) Approval		
							DAS 9 9-89 16-12-13		
Description Work Order Deviation				Disposition				Completed By	
Defect was found in paint				Scuff entire step making sure area were defect was found is scuff to bare metal				BEB 16/12/13 / 16-12-14	
R.C. environment				Alodine and re powder coat				Lead hand / Supervisor Approval Verification	
								DAS 9 9-89 16-12-14	
								QC / QA Coordinator Approval	
								DAS 9 9-89 16-12-14	
Root Cause				FAULT CATEGORY					
Environment ☒	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Set-up ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☒				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER :							

Work Order ID 153363

Friday, November 18, 2016 11:41:17 AM

153363

Page 6

Item ID: D350-591-312

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Heli-Access-Step™ RH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 12/12/2016 Start Qty: 10.00

10

Cust Item ID:

Required Date: 12/22/2016 Req'd Qty: 10.00

10

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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250 Pick Kit 0.00

250

Packaging Memo 0.02

Packaging

10
DAS 6
9-89
DAS 28
9-89
DEC 20 2016

260 QC4- 100% Inspect kits for completeness 0.00

260

QC Memo 0.05

Quality Control

10
DAS 27
9-89
JAN 03 2017

270 Packaging 0.00

270

Packaging Memo 0.00

Packaging Identify and pack for shipping as per PPPD350-591-312
Location :FG072

sold

10
DAS 28
9-89
DAS 27
9-89
JAN 06 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:12.5%;">Skid-tube ☐</td> <td style="width:12.5%;">Cross tube ☐</td> <td style="width:12.5%;">Water Jet ☐</td> <td style="width:12.5%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐											
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																																
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																																
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Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																												
Description Work Order Deviation				Disposition				Completed By																											
800 800 800								Lead hand / Supervisor Approval Verification																											
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Work Order ID 153363

Friday, November 18, 2016 11:41:17 AM

153363

Page 7

Item ID: D350-591-312

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Heli-Access-Step™ RH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 12/12/2016 Start Qty: 10.00

10

Cust Item ID:

Required Date: 12/22/2016 Req'd Qty: 10.00

10

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

NR1

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
280	QC21- Final Inspection - Work Order Release	0.00					DAS 21 9-89		
280									
QC	Memo	0.17							
Quality Control									

JAN 04 2017

VS 17/1/03
(H) 17-1-03

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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Picklist Print

Friday, November 18, 2016 11:41:28 AM

Page 1

Work Order ID: 153363

153363

Parent Item: D350-591-312

D350-591-312

Parent Item Name: Heli-Access-Step™ RH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 12/12/2016

Required Date: 12/22/2016

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP Rev:A04.03.22New issue KJ/RF
IPP Rev:B 07-06-09 Added D3572-1 JLM
IPP Rev:C 08-04-02 ECN1163 DD verified by:EC
IPP Rev:D 08-04-08 ECN1164 DD verified by:eC IPP Rev:D
fixe route seq in bom DD 10.04.28 verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
AN3-35A		Purchased	No			250	Each	74.0000	2	20	6 9-89	DEC 19 2016	DAS 28 9-89

AN3-35A

Bolt

Location	Loc Qty	Loc Code
FG	10	
122800	10	
ST348	64	
m135464	4	
m135767	60	

DAS
27
9-89

136406

AN4-13A

Purchased

No

250

Each

734.0000

8

80

DAS
6
9-89

DEC 19 2016

DAS
28
9-89

AN4-13A

Bolt

Location	Loc Qty	Loc Code
FG	20	
122808	20	
GA	76	
m134634	19	
m135470	57	
over003	400	
m136147	400	
ST343	238	
m134852	36	
m135470	2	
m135966	200	

DAS
27
9-89

80

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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OTHER :																																																																									

Picklist Print

Page 2

Friday, November 18, 2016 11:41:28 AM

Work Order ID: 153363

153363

Parent Item: D350-591-312

D350-591-312

Parent Item Name: Heli-Access-Step™ RH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 12/12/2016

Required Date: 12/22/2016

Start Qty: 10.00

Required Qty: 10.00

AN5-36A

Purchased

No

250

Each

170.0000

2

20

AN5-36A

Bolt

DEC 19 2016

DAS 6 28 9-89 9-89

Location

Loc Qty

Loc Code

over004

100

M136150

100

ST336

70

M135774

70

250

Each

200.0000

4

40

DAS 6 9-89

DEC 19 2016

DAS 28 9-89

Location

Loc Qty

Loc Code

FG

6

109344

4

89045

2

ST521

194

148845

21

149711

173

250

Each

76.0000

2

20

DEC 19 2016

4x B 151954 sp.

DAS 6 28 9-89 9-89

Location

Loc Qty

Loc Code

ST008A

2

150339

2

ST012a

74

151484

74

D2230-3

Manufactured

No

D2230-3

Mounting Lug

D2618

Manufactured

No

D2618

Bushing

DAS 27 9-89

DAS 27 9-89

DAS 27 9-89

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																
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Picklist Print

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Page 3

Work Order ID: 153363

153363

Parent Item: D350-591-312

D350-591-312

Parent Item Name: Heli-Access-Step™ RH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 12/12/2016

Required Date: 12/22/2016

Start Qty: 10.00

Required Qty: 10.00

D2856-400 Manufactured No

250 f 324.5359 1.2 12

***D2856-400*-720**

Abrasion Strip 4" Wide (Per Foot)

**

152536x13
154672x7

DEC 19 2016

DAS 28
6 9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

ST418

324.5358853

146265

108.535885

152590

216

cut (2) D2856-400-720 as per dwg

D3065-041

Manufactured No

180 Each 45.0000 1 10

D3065-041

Step Leg Assembly

**

10 C 16-06-17

Location

Loc Qty

Loc Code

WA002

45

B151199 → 3x

151199

15

B151922 → 7x

151922

30

180 Each 143.0000 2 20

D3066-1

Manufactured No

D3066-1

Spacer

**

B152346 → 20 C 16-12-07

Location

Loc Qty

Loc Code

WA003

143

150479

42

151991

40

152346

61

110 Each 165.0000 1 10

D3067-1

Manufactured No

D3067-1

End Plate

**

10 C 16-11-29

Location

Loc Qty

Loc Code

WA003

165

150439

50

150703

1

151980

41

152323

73

Friday, November 18, 2016 11:41:28 AM

Shop Packet Print

Page 3

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:12.5%;">Skid-tube ☐</td> <td style="width:12.5%;">Cross tube ☐</td> <td style="width:12.5%;">Water Jet ☐</td> <td style="width:12.5%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition																					
								Completed By																	
								Lead hand / Supervisor Approval Verification																	
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Root Cause		FAULT CATEGORY																							
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Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____																							
Misidentified ☐	Past Due ☐																								

Picklist Print

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Work Order ID: 153363

153363

Parent Item: D350-591-312

D350-591-312

Parent Item Name: Heli-Access-Step™ RH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 12/12/2016

Required Date: 12/22/2016

Start Qty: 10.00

Required Qty: 10.00

✓ D3067-1

Manufactured No

180

Each

165.0000

1

10

D3067-1

End Plate

DEC 07 2016

DAS
24
9-89

Location

Loc Qty

Loc Code

WA003

165

150439

50

150703

1

151980

41

152323

73

10

D3219-1

Manufactured No

110

Each

166.0000

2

20

D3219-1

Plate

20 C 16-11-29

B151843

Location

Loc Qty

Loc Code

WA003

166

149190

12

151196

10

151843

144

D3235-1

Manufactured No

250

Each

64.0000

2

20

D3235-1

Mounting Lug

151190
157920

DAS
6
9-89

DEC 19 2016

Location

Loc Qty

Loc Code

ST521

64

146290

2

147073

62

D3272-1

Manufactured No

110

Each

10.0000

1

10

D3272-1

Step

16.11.29

Location

Loc Qty

Loc Code

WA003

10

151908

10

153367

10

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Page 4

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
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Picklist Print

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Work Order ID: 153363

153363

Parent Item: D350-591-312

D350-591-312

Parent Item Name: Heli-Access-Step™ RH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 12/12/2016

Required Date: 12/22/2016

Start Qty: 10.00

Required Qty: 10.00

D3278-041

Manufactured No

250

Each

18.0000

1

10

D3278-041

Support Assembly

Location

Loc Qty

Loc Code

ST522

18

151201

18

180

Each

1,368.000

16

160

MS20600-AD4W4

Purchased

No

MS20600-AD4W4

Rivet

Location

Loc Qty

Loc Code

CCK004

1000

M135704

1000

ST308

158

M133990

158

WA003

210

M135442

210

MS21042L3

Purchased

No

MS21042L3

Nut

Location

Loc Qty

Loc Code

FP001

7

M130922

7

GA

200

m134360

108

m135135

92

OVER007

600

M136044

600

ST303

1050

m135767

450

m135945

600

DAS
27
9-89

**

Handwritten: 151201

DAS
6
9-89

DEC 19 2016

DAS
28
9-89

**

Handwritten: B135704

Handwritten: 151201

Handwritten: 1600

Handwritten: 2016/12/07

DAS
6
9-89

DAS
28
9-89

DEC 19 2016

Handwritten: 20

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
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				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

Picklist Print

Friday, November 18, 2016 11:41:28 AM

Page 6

Work Order ID: 153363

153363

Parent Item: D350-591-312

D350-591-312

Parent Item Name: Heli-Access-Step™ RH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 12/12/2016

Required Date: 12/22/2016

Start Qty: 10.00

Required Qty: 10.00

MS21042L4

Purchased

No

250

Each

1,842.000

8

80

MS21042I 4

Nut

DEC 19 2016

DAS
27
9-89

DAS
28
6 9-89

Location

Loc Qty

Loc Code

FP001

34

m133363

34

GA

200

m135058

200

OVER007

500

m135979

500

ST303

1108

m135774

108

m135864

1000

80

MS21042L5

Purchased

No

250

Each

454.0000

2

20

MS21042I 5

Nut

DEC 19 2016

DAS
27
9-89

DAS
28
6 9-89

Location

Loc Qty

Loc Code

GA

25

m127813

25

OVER007

200

m136047

200

ST303

229

m135297

59

m135544

100

m135774

70

20

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date: _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
				Lead hand / Supervisor Approval Verification					
				QC / QA Coordinator Approval					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : _____							

Picklist Print

Friday, November 18, 2016 11:41:28 AM

Work Order ID: 153363

153363

Parent Item: D350-591-312

D350-591-312

Parent Item Name: Heli-Access-Step™ RH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 12/12/2016

Required Date: 12/22/2016

Start Qty: 10.00

Required Qty: 10.00

NAS1149D0363J

Purchased

No

250

Each

1,018.000

4

40

NAS1149D0363.I

Washer

DEC 19 2016

DAS
6
9-89

DAS
28
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

GA

364

m134055

364

ST263

654

m135864

654

40

NAS1149D0463J

Purchased

No

250

Each

2,976.000

16

160

NAS1149D0463.I

Washer

DEC 19 2016

DAS
6
9-89

DAS
28
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

GA

80

M134508

13

M135056

67

ST260a

1600

M136044

1600

160

ST263

1296

M135671

3

M135767

293

M135948

1000

NAS1149D0563J

Purchased

No

250

Each

979.0000

4

40

NAS1149D0563.I

Washer

DEC 19 2016

DAS
6
9-89

DAS
28
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

GA

61

m133769

61

ST263

918

m135470

218

m135774

700

40

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step # : _____		QTY Effective : _____			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By _____		
							Lead hand / Supervisor Approval Verification _____		
							QC / QA Coordinator Approval _____		

Root Cause				FAULT CATEGORY						
Environment ☐	☐	No Re-verification ☐	☐	Pressure/Forced ☐	☐	Temperature/Cure ☐	☐	Power Loss/Surge ☐	☐	Positioned Wrong ☐
Design ☐	☐	Operator ☐	☐	Bending ☐	☐	Set-up ☐	☐	Folio/Program ☐	☐	Outside Dimensions ☐
Doc/Data ☐	☐	Offset/Setup ☐	☐	Centre Not Concentric ☐	☐	BOM/Route ☐	☐	Grain ☐	☐	Over/Under tolerance ☐
Equip/Tooling ☐	☐	Supplier ☐	☐	Cracks ☐	☐	Broken/Damage/Defect ☐	☐	Weld ☐	☐	Part Incorrect ☐
Handling/Pre ☐	☐	Training ☐	☐	Crimp/Kink/Ripple/Wave ☐	☐	Inspection Incomplete/Unqualified ☐	☐	Wrong Stock Pulled ☐	☐	Part Lost/Missing ☐
Material ☐	☐	Use for Testing ☐	☐	Cuffs ☐	☐	Contamination ☐	☐	Out of Sequence ☐	☐	Part Moved ☐
Internal Transport ☐	☐	Poor Information ☐	☐	Crushing ☐	☐	Countersink ☐	☐	Off-set ☐	☐	Drawing ☐
Tribal Knowledge ☐	☐	Rushing ☐	☐	Heat Treat ☐	☐	Cut Too Short ☐	☐	Mislabeled ☐	☐	Finish ☐
LOA ☐	☐	Product Improvement ☐	☐	Wave/Twist in Tube ☐	☐	Instructions Incomplete/Unclear ☐	☐	Fit/Function ☐	☐	Misread ☐
Substation ☐	☐	Process Improvement ☐	☐	Marks/Chatter ☐	☐	Drill Holes ☐	☐	Misaligned/off center ☐	☐	Turning Sequence ☐
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	☐	Past Due ☐								

DART

DESIGN <i>QD</i>	DRAWN BY <i>B</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>LE</i>	APPROVED <i>H</i>	DRAWING NO. D3272	REV. B SHEET 1 OF 3
DATE 07.05.18		TITLE STEP ASSEMBLY, HI LONG	SCALE NTS
A	04.03.01	NEW ISSUE	
B	07.05.18	D3272-1 WAS D2622-120	

RELEASED07.06.04-*H*

QTY -041	QTY -042	PART NUMBER	DESCRIPTION
X		D3272-041	STEP ASSEMBLY, HIGH LONG (LH)
	X	D3272-042	STEP ASSEMBLY, HIGH LONG (RH)
1	1	D3065-041	LEG ASSEMBLY
2	2	D3066-1	SPACER
2	2	D3067-1	END PLATE
2	2	D3219-1	SUPPORT
1	1	D3272-1	STEP
16	16	MS20600AD4W4	RIVET

GENERAL NOTES:

- 1) D3272-041 SHOWN. FOR D3272-042, INSTALL D3219-1 SUPPORT OPPOSITE SIDE
- 2) WELD PER DART QSI 004
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005.4.1
POWDER COAT ASSEMBLY WHITE (4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT PER DART QSI 005 4.4
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 5) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.
- 6) BREAK ALL SHARP EDGES 0.005 TO 0.010 MAX.

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 153363

Vic
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DQA: _____ Date: _____

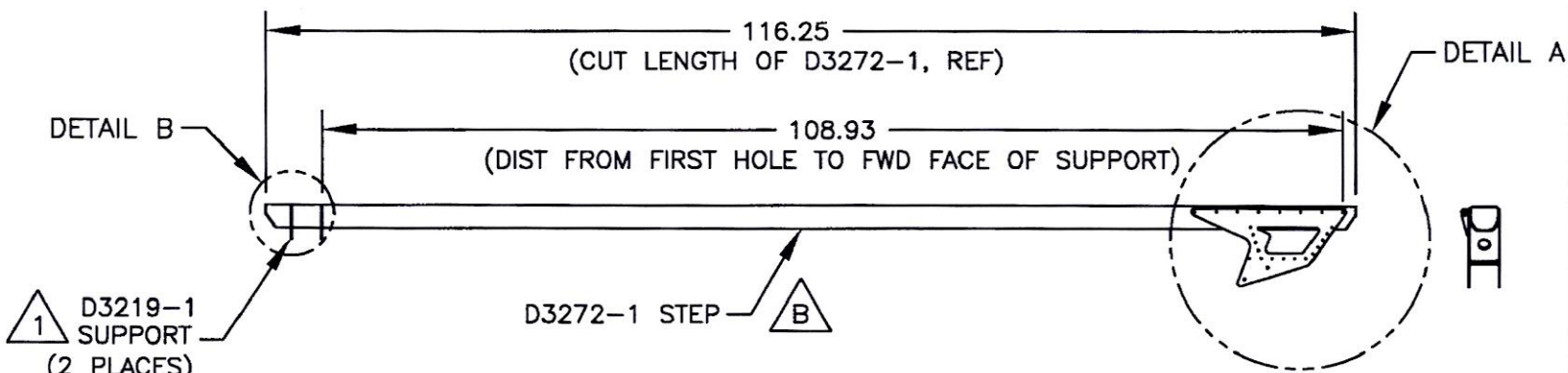
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

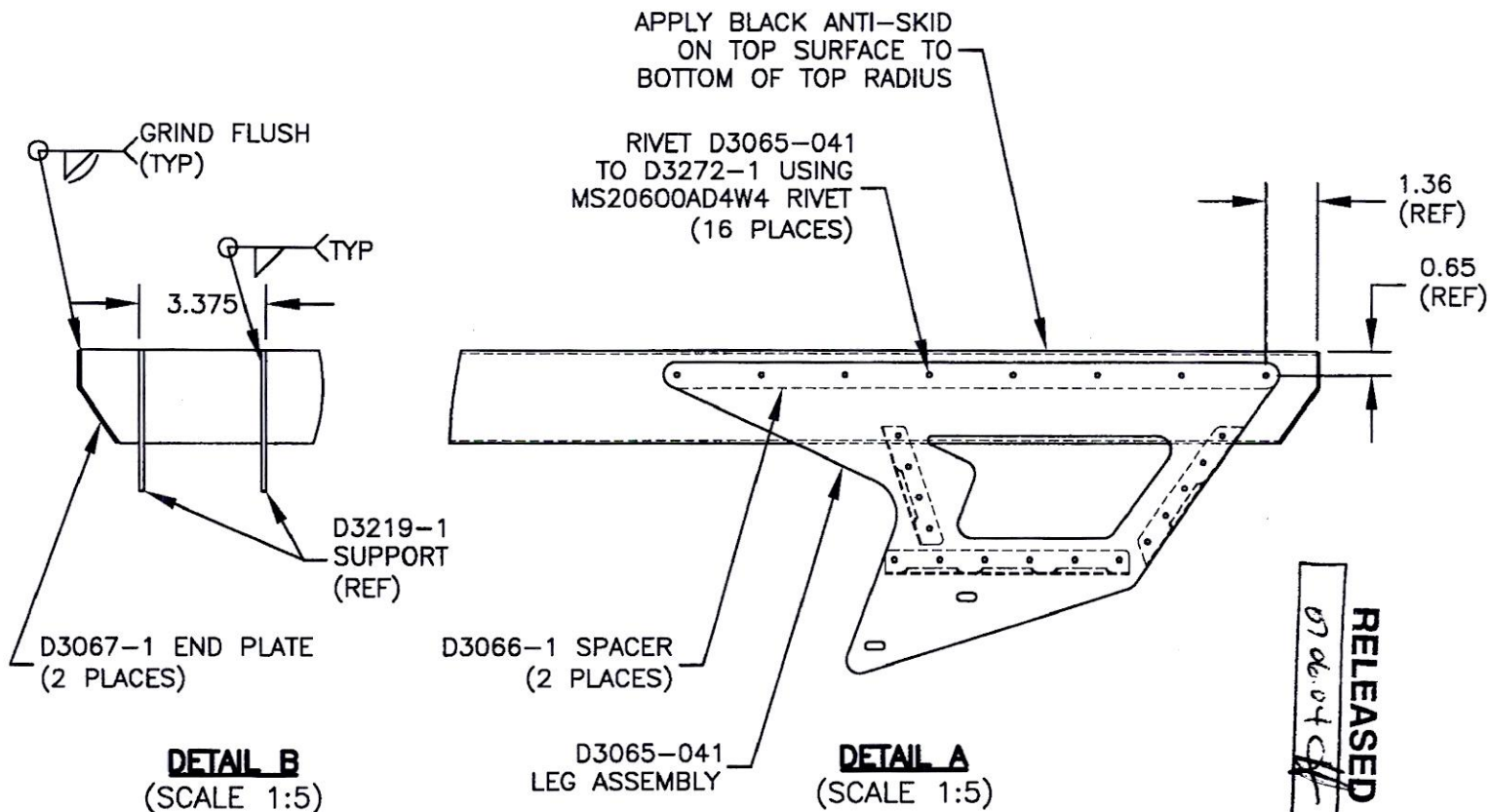
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER :							

DART



D3272-041 STEP ASSEMBLY (LH. SHOWN)
D3272-042 STEP ASSEMBLY (RH, OPPOSITE)



DESIGN	90	DRAWN BY	90	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHECKED	CE	APPROVED	CE	DRAWING NO. D3272
DATE	07.05.18	TITLE	STEP ASSEMBLY, HI LONG	REV. B SHEET 2 OF 3
		SCALE	1:20	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

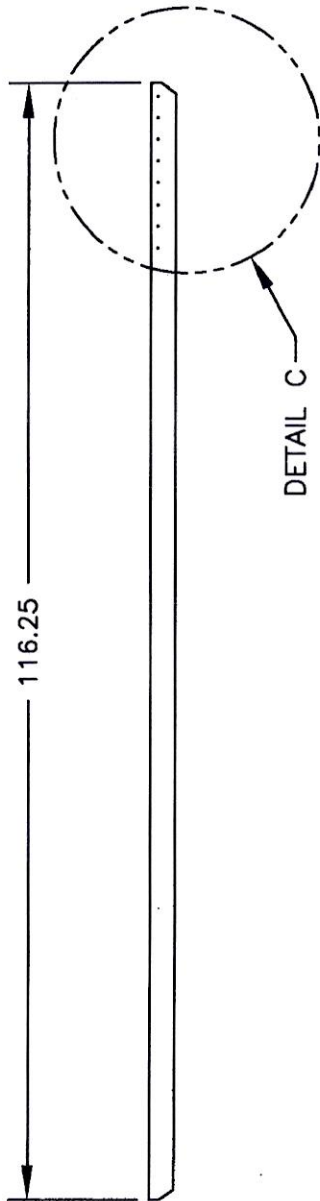
Root Cause			FAULT CATEGORY							
Environment ☐	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design ☐	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data ☐	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling ☐	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre ☐	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material ☐	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
Internal Transport ☐	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
Tribal Knowledge ☐	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA ☐	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation ☐	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date ☐	☐	Manufacturing Process	OTHER : _____							
Misidentified ☐	☐	Past Due								



DESIGN <i>GP</i>	DRAWN BY <i>JB</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>LE</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3272	REV. B SHEET 3 OF 3
DATE 07.05.18	TITLE STEP ASSEMBLY, HI LONG		SCALE 1:20

RELEASED

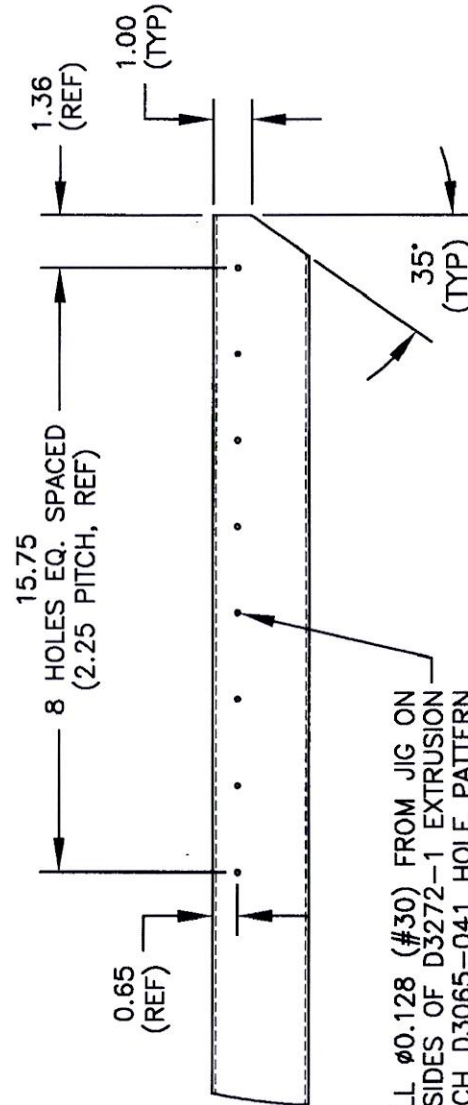
07.06.04 *[Signature]*



DETAIL C

B D3272-1 STEP

(MAKE FROM D2622-120 STEP EXTRUSION)



DRILL $\phi 0.128$ (#30) FROM JIG ON BOTH SIDES OF D3272-1 EXTRUSION TO MATCH D3065-041 HOLE PATTERN

DETAIL C
(SCALE 1:5)

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

Qty -213	Qty -214	Qty -215	Qty -216	Qty -311	Qty -312	Part Number	Description
X						D350-591-213	<i>Hel-Access-Step™</i> , Short Step – High Skid, LH
	X					D350-591-214	<i>Hel-Access-Step™</i> , Short Step – High Skid, RH
		X				D350-591-215	<i>Hel-Access-Step™</i> , Short Step – Low Skid, LH
			X			D350-591-216	<i>Hel-Access-Step™</i> , Short Step – Low Skid, RH
				X		D350-591-311	<i>Hel-Access-Step™</i> , Long Step – High Skid, LH
					X	D350-591-312	<i>Hel-Access-Step™</i> , Long Step – High Skid, RH
1						D3078-041	STEP ASSEMBLY (HIGH-SHORT, LH)
	1					D3078-042	STEP ASSEMBLY (HIGH-SHORT, RH)
		1				D3168-041	STEP ASSEMBLY (LOW-SHORT, LH)
			1			D3168-042	STEP ASSEMBLY (LOW-SHORT, RH)
				1		D3272-041	STEP ASSEMBLY (HIGH-LONG, LH)
					1	D3272-042	STEP ASSEMBLY (HIGH-LONG, RH)
2	2	2	2	4	4	D2230-3	MOUNTING LUG
2	2	2	2	2	2	D2618	BUSHING
4	4	4	4			D2732-030	CUSHION
				2	2	D2856-400-720	ABRASION STRIP
2	2	2	2	2	2	D3235-1	MOUNTING LUG
				1	1	D3278-041	SUPPORT ASSEMBLY
2	2	2	2	2	2	AN3-35A	BOLT
				8	8	AN4-13A	BOLT
4	4	4	4			AN4-15A	BOLT
2	2	2	2	2	2	AN5-36A	BOLT
4	4	4	4	4	4	NAS1149D0363J	WASHER (AN960JD10)
12	12	12	12	16	16	NAS1149D0483J	WASHER (AN960JD416)
4	4	4	4	4	4	NAS1149D0563J	WASHER (AN960JD516)
2	2	2	2	2	2	MS21042L3	NUT
8	8	6	6	8	8	MS21042L4	NUT
2	2	2	2	2	2	MS21042L5	NUT
				1	1	*DSI 9410-011	STEP MODIFICATION KIT

*DSI 9410-011 Step Modification Kits are provided with all D350-591-311 and D350-591-312 Steps. This kit is provided as an option for the installer and is therefore **NOT REQUIRED** to complete the installation of the D350-591-311 or D350-591-312 Steps. Refer to Figure 15 for installation of the DSI 9410-011 Kit.